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1. Introduction

This procedural directive supplemental describes the business rules and reporting procedures for the performance measures for the Habitat Program. Beginning in FY2010, acres of habitat restored and stream miles made accessible performance measures have also included those reported for the Protected Species Program's Pacific Coast Salmon Recovery Funds (PCSRF), so the business rules for these two measures have been updated accordingly to include PCSRF. In addition, this directive includes two performance measures under the Coral Reef Conservation Program, which are included in the NMFS habitat funding request for the Deep Sea Coral Research and Technology Program, established in FY2009. Specifically, this directive establishes the procedures for the creation, review, approval, reporting, and timing of changes to performance measure targets and actuals.

NOAA's Habitat Program protects and restores habitats that support NOAA trust resources and are essential to the long-term health and sustainability of coastal and marine ecosystems. NOAA's Coral Reef Conservation Program supports effective management and sound science to protect, sustain and restore coral reef and deep coral ecosystems, and complements Habitat Program goals in those ecosystems. NOAA is a trustee for natural resources associated with coastal, marine, and Great Lakes habitats, including rivers and estuaries. Resources include: commercial and recreational fishery

resources; diadromous species; marine mammals; endangered and threatened marine species and their habitats; marshes, mangroves, seagrass beds, tropical and subtropical coral reefs, deep sea coral communities, intertidal mudflats, and other coastal habitats; and resources associated with National Marine Sanctuaries and National Estuarine Research Reserves.

The Habitat Program applies current, effective science and technology to ensure that ecosystem productivity, function, and services are protected and restored utilizing a variety of strategies and measures authorized by dozens of legislative and executive mandates. The Habitat Program promotes sound stewardship by engaging partners (i.e. federal, state, tribal, and local agencies, and the public) to leverage additional capabilities that ensure long-term habitat stewardship and sustainability.

2. Performance Measures Business rules and reporting procedures are detailed in section 3 of this supplemental for the following performance measures:

- 3.01 Number of acres of habitat restored for ocean, coastal, and Great Lakes resources *[Government Performance and Results Act (GPRA) measure]*
- 3.02 Number of stream miles made accessible for ocean, coastal, and Great Lakes resources. *(NOAA Corporate Measure)*
- 3.03 Number of coastal, marine, and Great Lakes habitat acres protected from harmful impacts or identified threats.
- 3.04 Number of service hours of coastal community participation associated with habitat protection, restoration, education and outreach.
- 3.05 Percent of proposed actions that were modified per NOAA advice to reduce adverse effects to habitats for living marine resources.
- 3.06 Square kilometers of seafloor high resolution mapped with surveys for deep-sea coral habitat to address management priorities (Cumulative).
- 3.07 Square kilometers of seafloor with deep-sea coral habitat proposed for enhanced protection (Cumulative).

3. Business Rules and Procedures The following procedures will be followed for each performance measure identified.

3.01 Number of acres of habitat restored for ocean, coastal, and Great Lakes resources (GPRA)

This performance measure counts acres of habitat restored as a result of Habitat Program (HAB) and Protected Species Program (PSP) actions. The business rules below contain guidance regarding methodology for counting habitat acres. While both programs will abide by these rules, each program will retain separate management of project-level data and reporting processes, as defined below.

3.01.1 Definitions.

Habitat – The Habitat Program focuses on projects that occur in those habitat types of greatest benefit to NOAA's trust resources. These typically occur in the coastal zone and riparian habitats associated with diadromous fish migration; however, the Program also supports actions within the open ocean or in areas where benefits accrue to coastal zone or diadromous species or habitats. Habitat types are broken out in the Restoration Center's database (RCDB), as: beach, coral reef, dune, forested wetland, freshwater marsh, hard bottom, in-stream, kelp, mangrove, maritime forest, oyster reef/shell bottom, pond, riparian zone (non-wetland), rocky shoreline, salt marsh, shrub swamp (non-mangrove), soft bottom/ mud, soft bottom/sand, submerged aquatic vegetation, upland, and water column. Habitat types are broken out in the Pacific Coast Salmon Recovery Funds (PCSRF) data system, as: in-stream, riparian, (adjacent) upland, wetlands, and estuarine/nearshore. Each project tracked in the RCDB and PCSRF data system has a definitive area, expressed in acres, over which a functional change in specific habitat types is anticipated to occur (due to project activities); if the project includes more than one habitat type, an area is defined for each habitat type.

Restored – The Habitat Program uses four categories of restoration activities that add up to a cumulative "acres restored" total. The four categories are created, re-established, rehabilitated, and enhanced, and are adopted from the Council for Environmental Quality (CEQ) wetland habitats guidance. The definitions of each category reference wetlands, but for the purpose of this business rule, the manipulations described in the definitions are applied to the habitat types listed above, as applicable, and are not limited to wetlands. Descriptions of the categories are as follows:

Created – Creation is the manipulation of the physical, chemical, or biological characteristics present to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Establishment (creation) results in a gain in wetland acres.

Re-established – Re-establishment is the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to former wetland. Re-establishment results in rebuilding a former wetland and results in a gain in wetland acres.

Rehabilitated – Rehabilitation is the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions of degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres.

Enhanced – Enhancement is the manipulation of the physical, chemical, or biological characteristics of a wetland (undisturbed or degraded) site to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for a purpose such as water quality improvement, flood water retention or wildlife habitat. Enhancement results in a change in wetland function(s) and can lead

to a decline in other wetland functions, but does not result in a gain in wetland acres. This term includes activities commonly associated with the terms enhancement, management, manipulation, directed alteration.

Treated – A term used by PCSRF that includes all activities described in the definitions above for *re-established, rehabilitated,* or *enhanced.*

Data Verification – the process of evaluating the completeness, correctness, and conformance/compliance of a specific data set against the method, procedural, or contractual requirements.

3.01.2 Criteria to determine progress in meeting the performance target.

The Habitat Program and PCSRF separately report the acres restored for ocean, coastal, and Great Lakes resources to NMFS Office of Management and Budget. NMFS Office of Management and Budget will compile the reported numbers from each program into one NOAA number. Prior to the annual reporting of the Habitat Program and PCSRF acreage, representatives from each entity will convene a meeting to reconcile the accomplishments and make corrections, as necessary. This meeting is intended to avoid the double reporting of acreage.

Project acreage accomplishments to be discussed at the above mentioned meeting are only for those projects where restoration activities have been reported within the prior fiscal year. Restoration is considered complete when all construction activity (grading, planting, etc.) associated with the project is completed. If a project has phased accomplishments, they may be reported when a phase of the restoration has been fully completed within a defined area. As previously stated, restored acres are those that have been created, reestablished, rehabilitated, enhanced, or treated.

3.01.3 Specific counting methodology, algorithm, or other formula used to generate the numbers.

The number of acres restored for each project is determined spatially using the best available methods and scientific data. Examples of traditionally acceptable methods of data collection are aerial photograph interpretation, Global Positioning System (GPS), and topographic and bathymetric surveys. In general, data should be collected at a precision that enables reliable and repeatable calculations.

For programs and partnerships that utilize cooperative agreements and/or grants, such as the Community-based Restoration Program (CRP) and PCSRF, numbers for acres restored are provided through grantee progress reports for individual projects. Where feasible, NOAA staff, the partner administering the funds, or the grantee (the State or Tribal entity managing contracts) will perform site visits to verify the accuracy of reported values. For other programs and divisions (e.g. Damage Assessment, Remediation, and Restoration Program (DARRP), Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA)), acreage determinations are made directly by NOAA staff or by cooperating trustees or agencies when significant project milestones are met.

Each contributing program should employ procedures, as appropriate, to verify restored acreage data and/or conduct a site visit.

Acres Restored Data Verification – Data verification may be performed by personnel involved in the oversight of project implementation, the collection of samples or data, generation of analytical data, and/or by an external data verifier (*e.g.*, an implementing partner, contractor, etc.). Data verification should be performed upon receipt of progress reports and/or data, even if already conducted by the partner, applicant, etc., to confirm the completeness of the data prior to entry into the Restoration Center Database (RCDB), PCSRF data system, or the Public Consultation Tracking System (PCTS).

Site Visit Guidance – As a part of overall habitat restoration project oversight and technical assistance, staff may visit project sites prior to the application process (if applicable) and throughout the design, implementation, and monitoring/evaluation phases.

Because it is not efficient for Habitat Program, PCSRF, or HCD staff to verify all data or visit every site in every phase, the following criteria are considered by staff in determining when to employ one or both procedures:

- New or unknown project partner
- Technical capability of the partner
- New or unknown geographical area
- Sensitive project area (*e.g.*, cultural resources, historic preservation)
- New project type, restoration technique, or technology use
- Highly technical design or construction phase
- Significant project contribution to tracked metrics
- Significant or larger-scale projects that independently impact landscape-scale ecology or broader socioeconomies
- Project with NOAA or NOAA-partner as lead entity of multiple project partners/trustees
- Trustee or legal responsibility (*e.g.*, Endangered Species Act, Natural Resource Damage Assessment)

3.01.4 Reporting source.

The RCDB is the Habitat Program's database of record. The RCDB is maintained by the NOAA Fisheries Restoration Center with data entry input from OHC staff and NOS staff from programs that are members of the Habitat Program. The records are maintained as individual projects, and include data on status, environmental compliance, budget/funding, timing, location, partners, contacts, and volunteer/public involvement, as well as the performance measure data described within this document.

The PCSRF data system is the official database of record for projects reported under the

Protected Species Program. The raw data for the performance calculation is reported to NMFS by project participants through the PCSRF data system.

3.01.5 Methodology and process for setting the targets and the level of detail behind the targets.

Given the nature and scope of the type of restoration activities in which the Habitat Program and PCSRF engages, it is difficult to determine a strict dollar appropriated per acre restored value that would allow for consistently reliable and scalable target setting. Therefore, the Habitat Program and PCSRF shall employ a two-tier process to set targets.

Step 1 is intended for out year target setting and will be calculated using a rolling average of past accomplishments. However, prior to calculating the rolling average, projects that contributed more than 20% of the acreage accomplishments in previous years will be excluded from the average. This exclusion is designed to account for the fact that larger projects do not occur annually and, as such, skew the average and produce infeasible targets.

Step 2 target setting will provide an opportunity for refinement of each fiscal year's Tier 1 targets by considering the latest available project data. This should occur in the fourth quarter of the fiscal year. For example, Tier 1 targets for FY2014 will be refined using the Tier 2 rules in the fourth quarter of FY2013. Refinements will be based on a list of projects expected to be completed in the next four quarters, as known and appropriate. (include a sentence here? about based on experience not all projects actually get completed due to a variety of reasons so we use 75% of the total projected acres to develop the target). Information used in step 2 target setting may include lists of projects selected through competitive solicitations, projections of Natural Resource Damage Assessment settlements, and CWPPRA projects selected for inclusion in annual priority project lists (PPL).

3.01.6 Criteria for identification of the PPAs and capabilities that support the measures.

The majority of funds that support this performance measure derive from the lines in the Conference Reports for annual appropriations for the NOAA Fisheries budget under the headings "Pacific Coast Salmon Fund" and "Habitat Conservation and Management" and, specifically, for the latter – "Fisheries Habitat Restoration." Over the years, other directed appropriations under "Habitat Conservation and Restoration," such as the directed appropriations for oyster restoration and for Bronx River are also included as contributors to the acres restored measure. There are two other major sources of program funding, the CWPPRA and DARRP programs, which are not through appropriations to the NOAA budget. For DARRP, funds from natural resource damage assessment settlements are utilized to accomplish restoration. In addition, DARRP restoration is dependent on base funds used to support case settlements in the lines "Response and Restoration Base" under the NOS line "Response and Restoration." Additionally, for CWPPRA, funds are transferred from the Army Corps of Engineers for large-scale

restoration projects in Louisiana that are managed by Fisheries staff.

3.01.7 How the measure is affected by changes in funding levels and how targets corresponding to different funding scenarios are determined.

Though the number of acres restored is loosely correlated with funding, an increase in funding for programs that contribute to this measure will likely result in an increase in the target number of acres restored, and decreases in funding will result in lower targets. Target setting based solely on funding levels is further made difficult because of the time lag between appropriations and the completion of restoration activities. For example, projects funded through FY 2009 appropriations may not result in completion until FY 2011 or later; so a change in funding levels may not affect the yearly acres restored for several years. The DARRP program has been impacted by base funding cuts in the line "Response and Restoration Base" under the NOS line "Response and Restoration", which funds a portion of the NOAA staff participation in the entire process from injury determination and case settlement to restoration action. This reduction has decreased the programmatic output of acreages attributable to the DARRP because the number of personnel is static while the case load of oil spills and waste sites grows annually. This represents a continued lost opportunity to pursue restoration. (The DARRP process starts with NOAA's involvement in the remediation, injury determination, and case settlement aspects, which lead to restoration activities, so without funding for the initial DARRP activities, there will be no DARRP restoration.)

3.01.8 Additional contingencies that could potentially impact the result in unanticipated ways.

Certain Habitat Program initiatives and/or development of prioritization schemes may decrease the potential for large acreage projects given the higher relative costs of restoring in urban/suburban versus rural areas, thereby reducing the overall output of the Program. Additionally, unforeseen factors that can have unanticipated effects, such as weather issues, permitting delays, equipment shortages, implementation cost increases, and/or public concerns, may delay projects.

3.01.9 Approval structure.

Habitat Program:
Project data is entered by regional staff. Headquarters staff use project data to compile spreadsheets of cumulative acres restored; the spreadsheets include other project details such as project name, state, and program. As part of the QA/QC process, the spreadsheets are reviewed by program leads before final totals are submitted to the Habitat Program Coordinator. In addition, at the end of the fiscal year, at least one verification meeting is held with regional supervisors and headquarters program leads to review and confirm the data.

PCSRF:
Project data are provided to the PCSRF data system by the PCSRF grantees either by

direct web-form entry or via data uploads from the grantee's respective project tracking database. All project data and progress reports are reviewed by Northwest Fisheries Science Center (NWFSC) staff (the database administrator) and Northwest Region (NWR) staff. Reports of PCSRF performance measures are generated by NWFSC and NWR staff, and finally reviewed and cleared by the NWR Deputy Regional Administrator prior to transmission to Silver Spring. PCSRF hold an annual meeting with grantees to discuss data reporting issues and ensure the quality and consistency of reported metrics.

3.01.10 Timing of when updates are available and the periodicity of available reporting mechanisms.

This performance measure, number of acres restored, is tracked and reported on quarterly and annually by the Habitat Program and PCSRF, respectively.

3.02 Number of stream miles made accessible for ocean, coastal, and Great Lakes resources (corporate)

This performance measure counts stream miles made accessible as a result of Habitat Program (HAB) and Protected Species Program (PSP) actions. The business rules below contain guidance regarding methodology for counting stream miles, among other things. While both programs will abide by these rules, each program will retain separate management of project-level data and reporting processes, as defined below.

3.02.1 Definitions.

Stream miles – Following project activities, the potential linear extent of rivers and streams that is now accessible for diadromous and migratory fish passage.

Accessible – Fish passage is now possible across hydrological barriers or impediments such as dams, water control structures, culverts, and impoundments for juveniles and adults.

Diadromous fish – Species that use both marine and freshwater habitats during their life cycle. Species can be **anadromous**, living primarily at sea but migrating up rivers to spawn, or **catadromous**, living primarily in lakes, ponds and rivers but migrating out to sea to spawn.

Fish Passage Improvement Projects – projects that improve or provide diadromous fish migration up and down stream including fish passage at road crossings (bridges or culverts, barriers (dams or log jams), fishways (ladders, chutes or pools), and weirs (log or rock).

3.02.2 Criteria to determine progress in meeting the performance target.

The Habitat Program and the Pacific Coastal Salmon Recovery Fund (PCSRF) separately report the number of stream miles made accessible for ocean, coastal, and Great Lakes resources to NMFS Office of Management and Budget. NMFS Office of Management and Budget (OMB) will compile the reported numbers from each program into one NOAA number. HAB will submit quarterly progress reports to NMFS OMB. PCSRF will submit a progress report at the end of the fiscal year to NMFS OMB, following a reconciliation process to ensure shared project miles are not reported twice.

3.02.3 Specific counting methodology, algorithm, or other formula used to generate the numbers.

This performance measure tracks stream miles made accessible (through implemented projects, fishway prescriptions, or consultations) for diadromous fish passage across hydrological barriers or impediments such as dams, water control structures, culverts, and impoundments. This measure includes stream miles opened as a result of:

- Community-based Restoration Program and Open Rivers Initiative projects
- Federal Power Act Section 18 fishway prescriptions or settlement agreements
- Essential fish habitat consultation process
- Fish and Wildlife Coordination Act consultation process

- Damage Assessment, Remediation, and Restoration Program (DARRP) actions
- Pacific Coastal Salmon Recovery Fund projects

Criteria for counting stream miles:

- Stream and river miles are counted when fish access is physically restored by barrier removal or installation/improvement of fish passage structures such as fish ladders.
- Newly opened miles only include those upstream of the barrier or impediment and extend to the next upstream barrier, or, in the absence of additional upstream barriers, to the limit of the target species' historical range.
- Target species: If project actions provide passage for multiple target species with different habitat ranges above the barrier, the stream mile total reported for the project should reflect that of the species with the greatest range upstream of the project.
- Upstream and downstream passage: Stream miles should not be counted for a project unless both upstream and downstream passage is safe, timely, and effective for target species.
- Mainstem and tributary miles: Miles counted include the mainstem of the waterway and tributary miles. Stream miles upstream of the barrier in question should be counted when 1) they are accessible to the target species, 2) they fall within the historic range of the target species, and 3) habitat quality is sufficient to sustain healthy populations of the target species.
- Partial barriers: If project actions provide safe, timely, and effective passage for target species at partial barriers, stream miles will count towards this measure.
- Incremental improvements to existing passage: A stream mile may only be counted once (i.e., a stream mile may not be counted again after NMFS has counted it for a previous action).
- Incremental passage for additional species: If passage at a project site for target species is safe, timely, and effective and passage improvements are made to provide passage for an additional target species, then stream miles for the project improvements will count toward this measure only if the range of the additional species above the barrier is greater than the range for the previous target species. Only the miles beyond the range of the previous target species should be counted (i.e., if the miles counted for existing shad passage are 8 and passage improvements are made for American eel, whose range above the barrier is 10, then the miles counted for the improvements would be 2).
- Trap & Haul: In cases where there is no other viable passage solution at the barrier in question, stream miles made accessible due to trap and haul passage may be considered for the performance measure on a case-by-case basis. Where trap and haul passage is used as a temporary passage measure, stream miles above the barrier will not count until a permanent, volitional passage solution is in place.

3.02.4 Reporting source.

The Restoration Center Database (RCDB) is the official database of record for projects reported under the Habitat Program. This means all project-level data reported under this performance measure will be recorded in the RCDB. The RCDB is maintained by the NOAA Fisheries Restoration Center with data entry input from OHC staff. The records are maintained as individual projects, and include data on status, environmental compliance, budget/funding, timing, location, partners, contacts, and volunteer/public involvement, as well as the performance measure data described within this document.

The PCSRF data system is the official database of record for PCSRF projects. The raw data for the performance calculation is reported to NMFS by project participants through the PCSRF data system.

3.02.5 Methodology and process for setting the targets and the level of detail behind the targets.

HAB and PSP will set separate targets and NMFS Office of Management and Budget will roll the two program targets into a NOAA target.

HAB:
Given the nature and scope of the type of activities in which the Habitat Program engages, it is difficult to determine a strict dollar appropriated per stream mile made accessible value that would allow for consistently reliable and scalable target setting. Therefore, HAB will set targets for the upcoming fiscal year based on projects expected to make stream miles accessible during the upcoming fiscal year. Target setting should occur in the fourth quarter of the prior fiscal year. Targets will be based on a list of projects expected to be completed in the next four quarters, as known and appropriate.

PSP:
PCSRF targets are set based on historic performance and expected or assumed funding level for 5 years.

3.02.6 Criteria for identification of the PPAs and capabilities that support the measure.

The majority of funds that support this performance measure derive from the lines in the Conference Reports for annual appropriations for the NOAA Fisheries budget under the heading "Habitat Conservation and Management" and "Fisheries Habitat Restoration." The conference language may also include references to the Open Rivers Initiative that may specifically target amounts to be included for fish passage activities. A portion of funds from the line "Sustainable Habitat Management" covers all of the money to fund Fisheries staff support of the Hydropower Program. For DARRP, natural resource damage assessment settlements contribute to a pool of funds utilized to accomplish restoration on case-specific projects. DARRP restoration is dependent on base funds used to support injury assessment and case settlements in the line "Response and Restoration

Base" under the NOS line "Response and Restoration."

For PCSRF, activities covered under this measure are funded under PAC funding in the NMFS budget.

3.02.7 How the measure is affected by changes in funding levels and how targets corresponding to different funding scenarios are determined.

Since the number of stream miles made accessible generally correlates with funding, an increase in funding for programs that contribute to this measure will likely result in an increase in the target number of stream miles made accessible, and decreases in funding will result in lower targets. However, the time lag between appropriations and the completion of fish passage activities means there is a lag effect in the relationship between funding and stream miles made accessible. For example, funding made available recently for Open Rivers Initiative and the Hydropower Program, may not materialize into stream miles made accessible for several more years, as ORI projects complete the funding and construction cycles and as hydropower projects complete the 5-year licensing process and subsequent license implementation.

For PCSRF, targets are directly related to PCSRF funding levels. Targets are set based on the amount of resources directed at in-stream passage, the average cost of a passage project, and the expected PCSRF funding levels. As with the ORI and hydropower projects, there is a time lag between allocation of funds and expected response in performance measures.

3.02.8 Additional contingencies that could potentially impact the result in unanticipated ways.

Changes in baseline funding to contributing programs will impact this performance measure. Unforeseen factors that can have unanticipated effects, such as weather issues, permitting delays, and/or public concerns, may delay projects. Additionally, there is inherent uncertainty in the number of miles the NMFS Hydropower Program will be able to open in a given year because NOAA can only act on the projects that are scheduled for licensing according to schedules set by FERC. FERC often grants extensions to licensees or makes other changes in the licensing timeline which affect the timing of NMFS' prescriptions for fish passage. Additionally, FERC administers the implementation of license provisions leaving the ultimate determination on when stream miles will be physically accessible beyond NMFS control.

For PCSRF, the largest unknown, other than appropriations, is the proportion of projects that will be directed at in-stream passage projects. This proportion may change over time as other high priority limiting factors are identified and addressed by program participants.

3.02.9 Approval structure.

HAB and PSP will maintain separate control over project data contained in program databases and over approval and clearance processes for the performance calculation submitted to NMFS Office of Management and Budget. However, the two programs will annually reconcile project-level data to be reported in the current fiscal year to ensure stream miles made accessible are not double counted.

Each Program will follow its own approval and reporting process as follows:

HAB:
Restoration Center:
For Restoration Center reporting, including the Community-based Restoration Program, Open Rivers Initiative, and DARRP, project data are entered into the RCDB by regional staff. Headquarters staff use project data to compile spreadsheets of cumulative stream miles opened; the spreadsheets include other project details such as project name, state, and program. As part of the QA/QC process, the spreadsheets are reviewed by program leads before final totals are submitted to the Habitat Program Coordinator. In addition, at the end of the fiscal year, at least one verification meeting is held with regional team leads and headquarters program leads to review and confirm the data.

Habitat Protection/Conservation Divisions:
General Roles:

- Habitat ARAs: Review and approval of regional data reported; timely and complete reporting and data quality
- Habitat Protection Division Chief: Development of annual reporting calendar; identification of problems and gaps in reported data; communication of national performance data summary to Habitat Program

Process:

1. HPD Chief and Habitat ARAs will develop and agree to an annual reporting calendar that will include specific deadlines for the entire fiscal year
2. Habitat ARAs and their staff will ensure complete regional data entry, including all required fields, into the HPD-provided template on the last business day of each quarter. Required fields include: Project lead, name of project (including location and type of action (i.e., fish ladder, upstream passage, downstream passage, trap and haul, barrier removal, etc.), number of stream miles opened, closest city and state, project coordinates, date miles were opened, brief project description (i.e., project details, what NMFS did, species that benefitted), and ESA species affected
3. Habitat ARAs will review and approve regional performance measure data and submit to HPD Chief no later than the 7th business day following the end of the quarter.
4. HPD Chief will review regional data, verify its completeness, approve reported data, and submit it to the Habitat Program on behalf of the regions.
5. HPD Chief will provide a quarterly update of performance metric progress to regional HCDs.

PSP: This is a PCSRF PART performance measure and all information reported in the annual reports to Congress is approved by the Deputy Regional Administrator of the NMFS Northwest Region.

3.02.10 Timing of when updates are available and the periodicity of available reporting mechanisms.

Project data contributing to this measure are entered throughout the year, and a cumulative total is reported quarterly through the Habitat Program.

PCSRF project data are input into the PCSRF data system at the end of the 2nd quarter and the end of the fiscal year.

3.03 Number of coastal, marine, and Great Lakes habitat acres protected from harmful impacts or identified threats.

3.03.1 Definitions.

Habitat protected:

Beginning in FY11, "habitat protected" means NOAA trust resource habitats where NOAA's actions have reduced or averted threats to habitat. "Habitat protected" may include temporary protection from one or more threats and protections that overlap in time and space.

The following specific programs will contribute to the habitat protected measure:

For Habitat protection programs managed by NMFS Office of Habitat Conservation's (OHC) Habitat Protection Division (HP) and NMFS Regional Habitat Conservation Divisions (HCD), "habitat protected" in FY11 will count the following:

- Essential Fish Habitat (EFH) protected from fishing gear as a result of implementing Section 303(a)(7) of the Magnuson Stevens Act,
- Deep-sea coral habitat protected through Section 303(b)(2)(B) of the Magnuson Stevens Act.
- Habitat acres protected from fishing gear as a result of substantial coordination and action by Habitat Program staff to implement other provisions of the Magnuson Stevens Act. Only those actions with the primary or stated purpose of protecting fish habitat may be included in this measure. Indirect habitat benefits obtained through actions without the stated purpose of protecting habitat may not be included.
- Habitat protected through Section 305(b)(4) of the Magnuson Stevens Act, the Endangered Species Act, the Fish and Wildlife Coordination Act, the Federal Power Act, National Environmental Policy Act (NEPA), and/or application of Regional guidance/policy documents.

3.03.2 Criteria to determine progress in meeting the performance target.

Progress will be measured comparing an annual tally of acres protected against the target set for that year.

3.03.3 Specific counting methodology, algorithm, or other formula used to generate the numbers.

This measure will report the annual number of acres protected by the EFH program and the Deep-Sea Coral Research and Technology Program.

Rules for each program to determine which acres are included in the annual tally:

A) For acres of habitat protected from fishing impacts, the following criteria will be

used:

- Any designated EFH areas where fishing or the use of fishing gears has been restricted or modified in order to satisfy the requirements of Section 303(a)(7) of the Magnuson Stevens Act will be eligible.
- Any deep-sea coral area identified under Section 408 of the Magnuson Stevens Act where fishing has been restricted as a protection zone under Section 303(b)(2)(B) of the Magnuson Stevens Act will be eligible.
- All other habitat acres protected from fishing impacts using authorities established in the Magnuson Stevens Act and resulting from substantial coordination and action by Habitat Program staff. (Exclusions include acres indirectly protected by fishery management actions whose primary purpose was not to protect fish habitat).
- Acreage will be estimated to the nearest whole acre (this may have to be converted from hectares or square nautical miles which are often also used in the marine environment).
- The date of publication of the final implementing regulations in the Federal Register will be the year for which the acres are reported.
- Habitat acres protected from fishing impacts may only be counted once per Fishery Management Plan amendment or action (i.e. the same acre of habitat protected by multiple gear or fishery restrictions in the same fishery management action may be counted only once).

B) For acres of habitat protected from non-fishing impacts by regional Habitat Conservation Divisions, the following criteria will be used in FY11 to count qualifying acres:

- An area will be considered protected when a habitat threat originally proposed is reduced or averted through NMFS early coordination (as identified in Section 600.920(a)(3) of the Magnuson Stevens Act EFH regulations[1], application of existing NMFS policy/guidance documents (e.g. programmatic EFH consultation, habitat protection policies, etc.), EFH consultation, ESA consultation, FWCA consultation, and/or via the NEPA review process.
    - Early coordination may include pre-consultation, technical assistance and other interactions with federal agencies, non-federal partners, and/or project proponents. Early coordination activities that qualify may include meetings, phone calls, emails, or document reviews, for which reliable documentation is available to provide an administrative record (as defined below) of a modified action.
    - In cases where staff cannot determine whether an action was modified due to application of NMFS policy/guidance documents, acreage will not be reported under the "Acres Protected-for PM reporting" field.
- The acres protected will be based on the reduction in the size of the area impacted

[1] §600.920(a)(3) *Early notification and coordination*. The Federal agency should notify NMFS in writing as early as practicable regarding actions that may adversely affect EFH. Notification will facilitate discussion of measures to conserve EFH. Such early coordination should occur during pre-application planning for projects subject to a Federal permit or license and during preliminary planning for projects to be funded or undertaken directly by a Federal agency.

from the original action agency proposal, or the size of the area where the impact of the proposed threat has been reduced or averted, as recorded in the action agency's response letter and/or other reliable documentation. See required documentation below.

- **Determining the number of acres protected:** If acres protected exceeds one acre, NMFS staff should estimate the number of acres protected to the nearest whole acre. If the number of acres protected is less than one acre, NMFS staff should estimate acres to the nearest tenth of an acre. In estimating the size of the area protected, field staff should use the following guidelines:
  - Staff should use readily available information to determine the number of acres protected. If available information is insufficient to determine acreage protected, no acreage will be entered as protected in PCTS.
  - If the size of the impacted area is not provided by the action agency, NMFS staff will estimate the size of the impacted area using their best professional knowledge. **In cases where staff cannot estimate this area, no acreage will be entered as protected in PCTS**.
  - NMFS can count an area as protected even if the action agency did not adopt all NMFS advice. For example, if NMFS recommends that an action agency deny construction of all docks and piers in a given area, yet the agency agrees to permit only half of the proposed docks, the area of the original proposal would be counted as protected since the threat within the area was reduced or averted
  - The same acres protected from multiple threats through separate actions or by different authorities may be counted as protected in the annual tally of acres protected.

- **Reporting date:** The date of receipt of confirmation indicating that the federal action agency has modified the project per NMFS advice. See documentation requirements below.

- **Documentation requirements:** For all instances, the trigger for contributing acres protected from non-fishing habitat impacts to this performance measure is receipt of confirmation from the action agency or project proponent that the project has been modified per NMFS advice. Valid documentation of project modification may include the following:
  - A final response letter or email from an action agency. If all of EFH Conservation Recommendations provided are also included as Terms and Conditions in an ESA Biological Opinion for the same project, NMFS assumes that those CRs will be implemented, and no final response is required. When at least some of the EFH CRs are not included as ESA Terms and Conditions, a final response from the action agency is still required.
  - For ESA-only consultations, the issuance of an ESA Biological Opinion that contains Terms and Conditions intended to protect habitat
  - A copy of an issued permit

- A Record of Decision
- A revised project description from the action agency or applicant that reflects modifications per NMFS advice
- A memo to the file documenting how the action is modified.

- **Required PCTS fields**: To report the acres protected from non-fishing impacts by NMFS regional HCDs, the following fields in PCTS must be populated:

  Action Agency Final Response Date: Enter date of receipt of confirmation from the action agency that the project has been modified. For joint ESA/EFH consultations in which EFH Conservation Recommendations are wholly contained within the ESA Terms and Conditions, the date of issuance of the Biological Opinion will be used. See documentation requirements for valid documentation of project modification.

  Project modified?: Yes

  Habitat Type: select "Acres Protected-for PM reporting"

  Units (under the Mitigation section): Acres

  Protected: the number entered will be the number reported.

  NOTE: The "Acres Protected-for PM reporting" habitat type will be used for performance measure reporting only. Staff will select this habitat type and enter the appropriate number of acres protected under the Mitigation section. Staff may track additional information, including other habitat types, in the additional rows available under the EFH tab based on individual regional guidance.

For all contributing programs:
An acre is considered to be "protected" when one threat is averted or reduced. Given that a single habitat area may experience multiple threats over time, each NOAA protection response that reduces or avoids the proposed threat may be counted towards the annual and cumulative number of acres protected.

3.03.4 Reporting source.

The contributing programs will report from the following sources:

- Regional HCDs:
  (1) Reporting sources for acres of EFH, deep sea corals, and other habitats protected from fishing impacts will come from the code of federal regulations and through quarterly updates from regional HCDs.
  (2) Reporting sources to determine acres protected from non-fishing impacts will primarily come from the Public Consultation Tracking System.

3.03.5 Methodology and process for setting the targets and the level of detail behind the targets.

The targets will be based on the rolling average of past years' accomplishments. However, the rolling average will exclude projects that accounted for 10% or more of a past fiscal year's reported acreage. This exclusion discounts projects with exceptionally high acreage because projects of that nature cannot reasonably be expected to be implemented on an annual basis. Targets will be refined for each fiscal year in the fourth quarter of the previous fiscal year and will be based on a list of projects expected to be completed in the next four quarters.

3.03.6 Criteria for identification of the PPAs and capabilities that support the measure.

The majority of funds that support this performance measure derive from the following budget line items:

- Fisheries Research and Management Programs
- Reduce Fishing Impacts on Essential Fish Habitat (EFH)
- Habitat Management and Restoration

3.03.7 How the measure is affected by changes in funding levels and how targets corresponding to different funding scenarios are determined.

Changes in funding levels will affect which projects are implemented and the number of acres protected. Since protection is not based on an average cost per protected acreage, a change in funding will require prioritization of projects to maximize benefits to NOAA's trust resources. The cost of protection per acre can also vary greatly, so a particular percentage increase in funding would not necessarily result in a similar percentage increase in the number of acres protected.

3.03.8 Additional contingencies that could potentially impact the result in unanticipated ways.

Additional contingencies include natural disasters (such as hurricanes and floods), a sudden spike in a particular development threat, or dramatic shift in the economy that may lead to a sudden increase or decrease in the number of proposed actions requiring NMFS review. Because so many of HABs habitat protection programs are dependent on the actions of other agencies or fishery management councils, all of these factors could potentially affect the type of protection priorities and opportunities available to field staff.

3.03.9 Approval structure.

HP/HCDs will maintain separate control over project data contained in program databases and over approval and clearance processes for the performance calculation

submitted to the NMFS Office of Management and Budget:

Habitat Protection/Conservation Divisions:
General Roles:

- Habitat ARAs: Review and approval of regional data reported in PCTS; timely and complete reporting and data quality
- Habitat Protection Division Chief: Development of annual reporting calendar; identification of problems and gaps in reported data; communication of national performance data summary to Habitat Program

Process:

1. HPD Chief and Habitat ARAs will develop and agree to an annual reporting calendar that will include specific deadlines for the entire fiscal year
2. Habitat ARAs and their staff will ensure complete regional data entry in PCTS, including
    a. for acres protected from fishing impacts, provide an update to HPD by the deadline identified in the annual reporting calendar. The update should include the number of acres protected, the fishery and/or gear restrictions implemented, and the corresponding regulations.
    b. for acres protected from non-fishing impacts, update and review all required fields in PCTS by the deadline identified in the annual reporting calendar. Required fields include: "EFH Final Response", "Action Agency Final Response Date", "Project Modified", and, under the EFH Tab "Habitat Type", and under the Mitigation section "Units" and "Protected" .
3. Habitat ARAs will review and approve regional performance measure data and submit to HPD Chief by the deadline identified in the annual reporting calendar.
4. HPD Chief will review regional data, verify its completeness, approve reported data, and submit it to the Habitat Program on behalf of the regions.
5. HPD Chief will provide a quarterly update of performance metric progress to regional HCDs.

3.03.10 Timing of when updates are available and the periodicity of available reporting mechanisms.

Data contributing to this measure will be updated quarterly and reviewed at least annually.

3.04 Number of service hours of coastal community participation associated with habitat protection, restoration, education and outreach.

3.04.1 Definitions.

Community participation – hours of time spent by individuals on tasks that are meant to increase the stewardship of habitats and/or their associated living marine resources. Participation can vary from workshop attendance to actively restoring native plants to habitats. Scientific monitoring and attendance at outreach and educational activities sponsored by the NOAA Restoration Center, the NOAA Chesapeake Bay Office, the Regions, and its partners are also considered to be forms of participation.

Community participation-years – equivalent to one, non-NOAA person participating in habitat restoration related activities for one year.

3.04.2 Criteria to determine progress in meeting the performance target.

Data to track this measure is obtained from project progress reports from grantees, site visits, and attendance logs at restoration events and workshops that are received or held throughout the year.

3.04.3 Specific counting methodology, algorithm, or other formula used to generate the numbers.

Community participation hours (such as volunteer planting events, training sessions, restoration monitoring, and experiential environmental education activities) is tracked on a project-by-project basis. This measure is primarily comprised of hours of community participation in hands-on restoration projects, whose goals are to increase stewardship of NOAA trust resources. Only hours spent on projects at least partially funded by NOAA funds can be counted. Note that this measure tracks 3rd party activities, *i.e.* the activities of non-NOAA staff involved in projects and activities that NOAA sponsors. NOAA staff in non-duty status may also provide a negligible contribution to this overall measure. In addition to volunteer hours, the measure may count paid work hours performed by non-NOAA employees, such as staff from non-governmental organizations, state/local government, or schools. These hours can also be contributed as partner match in grant actions.

Workshop participation will comprise a minor, but important, contribution to this measure. When NOAA hosts, or co-hosts, workshops that are free to non-NOAA participants and the workshop addresses NOAA trust resources and/or is intended to facilitate the improvement of the quality of the environment, the hours of the participants may be counted toward this measure. A log of the participants, as well as an agenda from the workshop, is necessary to calculate the hours of community participation.

Though community participation is tracked in the number of service hours, this measure will be reported to NOAA's Office of Management and Budget in community

participation-years. The formula to calculate this metric is the total # of service hours divided by 2,080 hours (a standard work-year for federal employees).

3.04.4 Reporting source.

The Restoration Center Database (RCDB) is the primary source of data for this measure. The RCDB is maintained by the NOAA Fisheries Restoration Center. The records are maintained as individual projects and include data on status, environmental compliance, budget/funding, timing, location, partners, and contacts, as well as the performance measure data described within this document. Workshop participation logs coupled with agendas or other verifiable sources of data will be used to augment the data from the RCDB.

3.04.5 Methodology and process for setting the targets and the level of detail behind the targets.

Given the nature and scope of the type of restoration activities in which the Habitat Program engages, it is difficult to determine a strict dollar appropriated per hour contributed value that would allow for consistently reliable and scalable target setting. Participation seems to vary between 80,000 and 120,000 hours per year, depending on the type of projects funded within any year. A subset of projects account for the overwhelming percent achievement for the year. A general baseline level of hours are used for target setting based on previous trends and considering expected restoration projects in the upcoming fiscal.

3.04.6 Criteria for identification of the PPAs and capabilities that support the measure.

The majority of funds that support this performance measure derive from the lines in the Conference Reports for annual appropriations for the NOAA Fisheries budget under the heading "Habitat Conservation and Management" and, specifically, "Fisheries Habitat Restoration." Directed appropriations under "Habitat Conservation and Restoration" such as the directed appropriations for Pinellas and the Bronx River, and other appropriations that support Habitat activities such as "Chesapeake Bay Studies", "Bay Watershed Education and Training Program", or other related accounts may also be included as contributors to the community participation measure.

3.04.7 How the measure is affected by changes in funding levels and how targets corresponding to different funding scenarios are determined.

Since the number of hours of community participation generally correlates with number of projects completed, an increase in funding for programs that contribute to this measure would likely result in an increase in the target in the hours of community participation, and decreases in funding would result in lower targets. However, the time lag between

appropriations and the completion of restoration activities means there is a lag effect in the relationship between funding and hours of participation. This relationship is also subject to changing foci within the programs. As larger, more technically complex projects are funded, the opportunities for community participation are reduced. Such large complex projects are typically more costly so that an increase in funding associated with these kinds of projects could potentially result in less volunteer hours.

3.04.8 Additional contingencies that could potentially impact the result in unanticipated ways.

General project delays could influence the reporting of these hours. If the projects supporting the higher number of community participation hours were delayed or postponed in a certain year, they could have a large influence on that year's accomplishment.

3.04.9 Approval structure.

Hours and number of participants are entered primarily through progress reports via the Community-based Restoration Program. Staff in the field enter this data and approve the records for use. In cases where the number of hours is large, staff will often call and verify the accuracy of the report with grantees. For projects not supported through the Community-based Restoration Program, staff verifies participation with project leads.

3.04.10 Timing of when updates are available and the periodicity of available reporting mechanisms.

While the data contributing to this measure can be updated throughout the fiscal year, the majority of updates tend to occur in the fourth quarter for this measure. Focus is placed throughout the year on updating records in order to meet quarterly targets for acres restored and stream miles opened, and there is a priority on spending staff hours in updating this information. Quarterly reporting on the measure occurs during normal reporting cycles for the Habitat Program, allowing a check on progress towards achieving the yearly target.

3.05 Percent of proposed actions that were modified per NOAA advice to reduce adverse effects to habitats for living marine resources

3.05.1 Definitions.

Actions – a single project, including those with multiple phases or interactions with the federal action agency.

Modified - a proposed action that is changed to avoid, reduce, or offset impacts to NOAA trust resources, including those that are only partially responsive to NOAA advice.

Advice - any recommendations provided by NOAA, either as conservation recommendations within an EFH Consultation or more informally as technical input (e.g., pre-consultation).

Adverse effects – reduction in the quantity or quality of habitat.

3.05.2 Criteria to determine progress in meeting the performance target.

This measure tracks NOAA effectiveness in getting science-based technical assistance or conservation recommendations accepted by federal action agencies, and therefore, NOAA effectiveness in protecting living marine resources. The number of proposed actions modified to reduce adverse effects is entered on a project by project basis throughout the year by program staff in Fisheries.

For all instances, a project is considered modified when NMFS receives confirmation from the action agency or project proponent that the project has been modified per NMFS advice. Valid documentation of project modification may include the following:

- A final response letter or email from an action agency. If all of EFH Conservation Recommendations provided are also included as Terms and Conditions in an ESA Biological Opinion for the same project, NMFS assumes that those CRs will be implemented, and no final response is required. When at least some of the EFH CRs are not included as ESA Terms and Conditions, a final response from the action agency is still required.
- A copy of an issued permit
- A Record of Decision
- A revised project description from the action agency or applicant that reflects modifications per NMFS advice
- A memo to the file documenting how the action is modified.

Modifications that are partially responsive to NOAA advice should be counted in addition to those that are 100% responsive (i.e. count any change to the action that is responsive to NOAA advice). A project should not be counted more than once, even if the action is modified per NOAA advice in different ways at different stages of the project review (e.g., if the project footprint is reduced based on pre-application advice and a seasonal restriction is accepted later through EFH consultation).

3.05.3 Specific counting methodology, algorithm, or other formula used to generate the numbers.

The percentage of proposed actions modified to reduce adverse effects is determined using the formula:

$$\frac{\text{(\# projects modified per technical guidance, assistance, and recommendations)}}{\text{(Total \# of projects where technical guidance, assistance, and recommendations were accepted or rejected by action agencies)}}$$

Data is provided by NOAA staff based on technical assistance or conservation recommendations accepted by federal action agencies. A project should not be counted more than once, even if the action is modified per NOAA advice in different ways at different stages of the project review (e.g., if the project footprint is reduced based on pre-application advice and a seasonal restriction is accepted later through EFH consultation).

Information entered in the "Project modified?" field in PCTS will be used to calculate the percentage of actions modified. The percentage reported for this performance measure will reflect the following:

$$\frac{\text{\# of projects entered in PCTS for which } \textbf{Project modified?} = \text{'Yes'}}{\text{\# of projects entered in PCTS for which Project } \textbf{modified?} = \text{'Yes' or 'No'}}$$

Staff should use readily available information to determine whether a proposed action was modified per NOAA Fisheries' advice. If available information is insufficient to determine whether an action was modified, the "Project modified?" field in PCTS should be left blank.

3.05.4 Reporting source.

The Public Consultation Tracking System (PCTS) is the primary database of record. The PCTS is maintained by the NOAA Fisheries Service with data entry input from regional habitat staff. The records are maintained as individual projects, and include data on consultation type, title, status, lead NOAA office, lead action agency, date consultation received and NOAA response provided, NOAA's final response, location, type of action, and habitat type, as well as the performance measure data described within this document. Additional data may be used from separate regional records for projects that are not mandated consultations, but that do generate technical assistance or advice from NOAA. To report for this performance measure, NOAA staff are required to record the relevant response in the "Project modified?" field in PCTS if that information is available.

3.05.5 Methodology and process for setting the targets and the level of detail behind the targets.

The target for this performance measure must be under 100%, because action agencies often take other factors into consideration (economic, social) along with NOAA recommendations in making a determination about a specific project. Targets are determined by reviewing the degree to which previous year targets were met.

3.05.6 Criteria for identification of the PPAs and capabilities that support the measure.

The majority of funds that support this performance measure derive from the lines in the Conference Reports for annual appropriations for the NOAA Fisheries budget under the heading "Fisheries Research and Management" and Sustainable Habitat Management". Funding from these PPAs support consultations costs mandated under the Fish and Wildlife Coordination Act, the Magnuson Act, the Clean Water Act, and others.

3.05.7 How the measure is affected by changes in funding levels and how targets corresponding to different funding scenarios are determined.

The results of this measure are dependent on the degree to which NOAA is able to convince other federal agencies to modify their actions. As funding decreases, there will be fewer staff to conduct the necessary pre-consultation meetings and background research to support solid justifications. This will reduce the likelihood that action agencies will adopt NOAA habitat recommendations.

3.05.8 Additional contingencies that could potentially impact the result in unanticipated ways.

Not applicable

3.05.9 Approval structure.

General Roles:

- Habitat ARAs: Review and approval of regional data reported in PCTS; timely and complete reporting and data quality
- Habitat Protection Division Chief: Development of annual reporting calendar; identification of problems and gaps in reported data; communication of national performance data summary to Habitat Program

Process:

6. HPD Chief and Habitat ARAs will develop and agree to an annual reporting calendar that will include specific deadlines for the entire fiscal year
7. Habitat ARAs and their staff will ensure complete regional data entry in PCTS, including the update and review of all required fields in PCTS by the deadline identified in the annual reporting calendar.
8. Habitat ARAs will review and approve regional performance measure data and

submit to HPD Chief by the deadline identified in the annual reporting calendar.

9. HPD Chief will review regional data, verify its completeness, approve reported data, and submit it to the Habitat Program on behalf of the regions.
10. HPD Chief will provide a quarterly update of performance metric progress to regional HCDs.

3.05.10 Timing of when updates are available and the periodicity of available reporting mechanisms.

Project data contributing to this measure are entered throughout the year, and a percentage is reported quarterly by the Habitat Program to the executing line office, NOAA Fisheries.

3.06 Square kilometers of seafloor high resolution mapped with surveys for deep-sea coral habitat to address management priorities (Cumulative)

3.06.1 Definitions.

Deep-sea coral – Deep-sea corals (the term used in the MSA), also known as "deep water" or "cold-water" corals, are azooxanthellate corals generally occurring at depths below 50 m. For the purposes of NOAA's activities and this performance measure, the definition refers to the subset of *structure-forming deep-sea corals,* those colonial coral species that contribute to three-dimensionally complex habitats in deeper waters. Structure-forming deep-sea corals are defined as those coral species that provide vertical structure above the seafloor and are of sufficient size to provide substrate or refuge for associated fishes and invertebrates. Deep-sea corals include both branching stony corals that form a structural framework (e.g., *Lophelia pertusa*) as well as individual colonies of corals, such as gorgonians and other octocorals, black corals, gold corals, and lace corals. These are often referred to as habitat-forming deep-sea, deep-water, or cold-water corals. The more neutral term "structure-forming" has been used instead of "habitat-forming" to avoid an implication that habitat associations with other species have been demonstrated. (Definition based on the *NOAA Strategic Plan for Deep-Sea Coral and Sponge Ecosystems*).

Seafloor high resolution mapped with surveys for deep-sea coral habitat – Area of the seafloor 1) that is surveyed using acoustic multibeam or comparable technologies to produce bathymetry maps and associated backscatter imagery at depths of 50 - 2000 m on continental shelves, slopes, island flanks and seamounts; and 2) for which representative features have been further characterized using appropriate high resolution techniques (e.g., video observations from submersibles, remotely-operated vehicles (ROVs), autonomous underwater vehicles (AUVs), acoustic techniques (e.g., side-scan sonar), or other techniques (e.g., laser line-scan)) to determine the distribution of deep-sea coral habitats or potential habitats.

Management priorities – areas prioritized by NMFS, Fishery Management Councils, Sanctuaries, and/or other partners where new information may inform management of deep-sea corals as essential fish habitat, bycatch, or under the Magnuson-Stevens Fisheries Conservation and Management Act (MSA) Section 303(b)(2)(B) discretionary authority.

3.06.2 Criteria to determine progress in meeting the performance target.

The *Deep Sea Coral Research and Technology Program* will provide funds to conduct mapping surveys to locate deep-sea coral communities. The first step to increasing our understanding of deep-sea coral and sponge communities and to develop appropriate management strategies is to locate and map these habitats.

The Program will also develop and update databases as soon as map products from

mapping cruises become available and will report annually on progress made to meeting the performance targets. Summaries will be included in the mandated biennial reports to Congress.

3.06.3 Specific counting methodology, algorithm, or other formula used to generate the numbers.

GIS maps showing areas surveyed and the locations of deep-sea coral habitats will be produced. Maps and underlying GIS databases will be managed by the *Deep Sea Coral Research and Technology Program*.

3.06.4 Reporting source.

NOAA's deep-sea mapping activities, both those expected to be funded through the *Deep Sea Coral Research and Technology Program* and existing activities conducted by the OAR Office of Ocean Exploration and Research, NMFS Science Centers, or other NOAA mapping efforts.

3.06.5 Methodology and process for setting the targets and the level of detail behind the targets.

The targets for new field research and square kilometers of seafloor mapped were set based on the amount of mapping and characterization that could be expected to be completed with the amount of funds requested for and allocated to this component of the Program. Cost estimates are based on similar work conducted by NOAA over the past several years. Cost estimates are shown in the table below. A $1.0M investment in a deep-sea coral expedition would support a cruise of approximately 17 days. This would include 1-day for mobilization and 1-day for demobilization, and approximately 3-days of transit time to and from the operating area, as well as between select targets. This would result in a total of 12-days of operations. Depending on the size of the operating area and the distance between select targets, approximately 3-4 targets could be mapped, sampled, and investigated using an ROV and other instruments. For each target (depending on pre-existing knowledge) this could translate into approximately 24-hours of multibeam mapping - at 10 knots and depending on depth this would result in approximately 400-650 square kilometers mapped - and approximately 40-hours of ROV and other operations. Depending on the availability of vessels, their capabilities, and other factors, it may be more efficient to conduct multibeam and ROV surveys from separate vessels – which will also affect cost estimates. For surveys in shallower depths (<500 m) where less current is expected, less capable but lower cost ROVs may be used, which can increase the number of targets surveyed. Autonomous underwater vehicles (AUVs) may also provide photographic characterization of sites at a lower cost, but cannot collect samples. NOTE: (1) Costs for vessels and submersibles (NOAA and non-NOAA) can fluctuate dramatically due to fuel costs and other factors. As costs rise, it is

important to minimize transits and maximize time on station.

Table. Estimated current costs for a 17-day deep-sea coral expedition.			
ITEM	**COST/DAY ($K)**	**TOTAL COST ($K)**	**COMMENT**
Vessel	**$ 24**	**$ 408**	Similar to NOAA Ship Ron Brown
Submersible/ROV	**$ 20**	**$ 340**	Similar to JASON or ROPOS
Proposal	**NA**	**$ 252**	Interdisciplinary Science Team
TOTAL		**$ 1 ,000**	

Targets will also be influenced by the management priorities and resultant focus for field research each fiscal year within a particular region, as well as the extent to which adequate existing multibeam bathymetry for target sites is currently available. The suitability of multibeam mapping in locating deep-sea coral habitat is dependent upon the dominance of structure-forming stony corals. In regions where these taxa are lacking, multibeam mapping will be utilized to a lesser degree, if at all, and principal emphasis will be placed on characterization surveys.

3.06.6 Criteria for identification of the PPAs and capabilities that support the measure.

This performance measure meets specific requirements of the *Deep Sea Coral Research and Technology Program* mandated in the Magnuson-Stevens Fisheries Conservation and Management Act (16 U.S.C. 1801 et seq.; MSA). The specific requirements (Sec. 408) are to:

- "locate and map locations of deep sea corals and submit such information to the Councils" and
- "submit biennial reports to Congress and the public on steps taken by the Secretary to identify, monitor, and protect deep sea coral areas, including summaries of the results of mapping, research, and data collection performed under the program."

The performance measure also responds directly to objectives of NOAA's Strategic Plan for Deep-Sea Coral and Sponge Ecosystems, including the objective: "Locate and characterize deep-sea coral and sponge ecosystems."

3.06.7 How the measure is affected by changes in funding levels and how targets corresponding to different funding scenarios are determined.

See 3.10.5 above. The estimates are determined for each $1 million in funding available and directed toward new research and mapping cruises. Estimating increasing costs at 5% per year would require approximately $150K more to support such a cruise in FY13 than in FY12.

3.06.8 Additional contingencies that could potentially impact the result in unanticipated ways.

Results will be dependent upon the availability of ship resources. Use of vessels other than NOAA ship resources could substantially increase costs and decrease the areas mapped. Field operations are always weather dependent, so targets may have to be adjusted depending upon the ability of ships to conduct research.

3.06.9 Approval structure.

Processed multibeam maps (bathymetry and backscatter imagery) and habitat characterization products (including deep-sea coral locations) will be submitted by PIs on cruises funded by the program. The proposed GIS database holding map products and habitat characterization information will be managed by the data manager of the Deep Sea Coral Research and Technology Program, who will be responsible for the QA/QC process. Final totals are submitted to the NMFS Office of Habitat Conservation, which is responsible for reporting. Multibeam products will be archived with NOAA's National Geophysical Data Center.

3.06.10 Timing of when updates are available and the periodicity of available reporting mechanisms.

The *Deep Sea Coral Research and Technology Program* will report annually on progress made to meeting the performance targets. Summaries will be included in the mandated biennial Reports to Congress.

3.07 Square kilometers of seafloor with deep-sea coral habitat proposed for enhanced protection (Cumulative)

3.07.1 Definitions.

Enhanced protection – Additional management actions/designations taken by NMFS, the Fishery Management Councils, the Sanctuaries, and/or other partners to protect deep-sea corals from damage by human activities. Protection may be achieved through conservation and management measures that minimize the adverse effects on essential fish habitat, minimize bycatch of corals, and/or protect deep-sea corals in deep-sea coral zones from physical damage from fishing gear under the Magnuson-Stevens Fisheries Conservation and Management Act (MSA) Section 303 (b)(2)(B) discretionary authority. Additional conservation and management measures may be instituted through sanctuary authorities under the National Marine Sanctuaries Act.

Essential fish habitat (EFH) – means those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity. Waters include aquatic areas and their associated physical, chemical and biological properties. Substrate includes sediment underlying the waters. 'Necessary' means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem. Spawning, breeding, feeding, or growth to maturity covers all habitat

types utilized by a species throughout its life cycle.

Habitat Area of Particular Concern (HAPC) – HAPCs are subsets of EFH. HAPCs highlight specific habitat areas with extremely important ecological functions and/or areas that are especially vulnerable to human-induced degradation.

Deep-sea coral zones – those areas where deep-sea corals are identified under section 408 of the MSA (the *Deep Sea Coral Research and Technology Program*), and are designated in an FMP to protect deep-sea corals from physical damage from fishing gear or to prevent loss or damage to such fishing gear from interactions with deep sea corals. Deep-sea coral zones may also contain EFH, but are not required to.

3.07.2 Criteria to determine progress in meeting the performance target.

The *Deep Sea Coral Research and Technology Program* will develop and maintain a database of areas identified as containing deep-sea corals and proposed or actual protections that may be applicable to these areas. Information will be provided by the *Deep Sea Coral Research and Technology Program* to the affected Regional Fishery Management Councils, National Marine Sanctuaries and other partners. NMFS, in consultation with the fishery management councils and other partners, will update the list of important deep-sea coral sites every two years and include this information in the biennial report to Congress. The areas on this list will be presented to the appropriate fishery management council for consideration as designated EFH, HAPCs or Deep-sea coral zones, or for actions to minimize interactions of deep-sea corals and fishing gear. Information will also be presented to Sanctuaries for consideration as in designating Sanctuary Restricted Zones.

3.07.3 Specific counting methodology, algorithm, or other formula used to generate the numbers.

Number of areas containing deep corals and their spatial extent (km^2) that are proposed proposed by NMFS, councils, and sanctuaries for enhanced protection. Enhanced protection may be granted to areas that already benefit from some management under a different authority. For instance, deep-sea coral areas within designated National Marine Sanctuaries that are further proposed for protection from fishing gears would contribute to this measure. This additional managewment measure represents enhanced protection. Therefore the same areas containing deep-sea coral habitat may subsequently be scored for additional protections. Areas will not be scored for extensions to existing protections. If areas contain deep-sea coral habitats and are removed from protection scored under this performance measure, the cumulative total area will be reduced by this amount.

3.07.4 Reporting source.

NMFS may develop written recommendations to assist each Council in the identification of DSC zones or, if appropriate, essential fish habitat (EFH) or habitat areas of particular concern (HAPCs), actions that should be taken to protect DSCs from physical damage from fishing gear, and/or actions to minimize the bycatch of DSCs. These recommendations may be provided for the initial incorporation of DSC information into an FMP and for any subsequent modification to fishery management actions. These recommendations may be transmitted via memo from the Director of the Office of Habitat Conservation, Chief of the NMFS Habitat Protection Division, or NMFS Regional Administrator to the appropriate Council for consideration at any time. Additionally, changes to National Marine Sanctuary boundaries or zoning will be captured in revised National Marine Sanctuary management plans.

3.07.5 Methodology and process for setting the targets and the level of detail behind the targets.

Targets for FY 13 were set using best estimates of information likely to be available to the *Deep Sea Coral Research and Technology Program.* Further elaboration of the targets will depend upon the development of new information on currently unprotected deep-sea coral areas. This performance measure and its targets are likely to be refined in consultation with the Regional Fishery Management Councils.

3.07.6 Criteria for identification of the PPAs and capabilities that support the measure.

This performance measure meets specific requirements of the *Deep Sea Coral Research and Technology Program* mandated in the Magnuson-Stevens Fisheries Conservation and Management Act (16 U.S.C. 1801 et seq.; MSA). The specific requirement is to:

- "locate and map locations of deep sea corals and submit such information to the Councils;
- to monitor activity in locations where deep sea corals are known or likely to occur, based on best scientific information available, including through underwater or remote sensing technologies and submit such information to the appropriate Councils;"

The performance measure also responds directly to objectives of NOAA's Strategic Plan for Deep-Sea Coral and Sponge Ecosystems, including the following Conservation and Management Objectives:

- Protect areas containing known deep-sea coral or sponge communities from impacts of bottom-tending fishing gear.
- Protect areas that may support deep-sea coral and sponge communities where mobile bottom-tending fishing gear has not been used recently, as a precautionary measure.
- Develop regional approaches to further reduce interactions between fishing

gear and deep-sea corals and sponges.
- Enhance conservation of deep-sea coral and sponge ecosystems in National Marine Sanctuaries and Marine National Monuments.

Bycatch records will provide broad-scale geographic information on the location of deep-sea corals in areas that are fished, that will complement NMFS scientific trawl survey and the finer scale deep-sea coral mapping and characterization efforts that will be conducted from NOAA research vessels. Bycatch records will also provide a direct measure of the interaction between fishing (the major human activity thought to threaten deep-sea coral habitats) and deep-sea corals.

3.07.7 How the measure is affected by changes in funding levels and how targets corresponding to different funding scenarios are determined.

Determination of new areas that contain deep-sea corals is dependent upon the availability of funding to explore and map new areas. These deep-water efforts require specialized technology and cannot be conducted without dedicated resources. If funding for new mapping, surveys, and associated research is not available, large areas of the EEZ will not have sufficient characterization to determine if they contain deep-sea coral habitats and the ecological functions and services that these habitats provide.

3.07.8 Additional contingencies that could potentially impact the result in unanticipated ways.

The Councils and NMFS have a target to review the EFH provisions of FMPs and revise or amend EFH provisions as warranted based on available information at least once every five years.. Thus EFH-based proposals may be reliant on the timing of the next EFH review.

Unexpected changes in a fishery such as a stock collapse or other emergency situation may require resources and priorities to shift towards addressing that issue over other fishery-related actions such as deep-sea coral protections. Areas proposed for enhanced management may be delayed based on timing of such situations.

3.07.9 Approval structure.

The Office of Habitat Conservation will maintain the database containing areas proposed for designation in cooperation with the data manager of the *Deep Sea Coral Research and Technology Program*. The database will be updated when new areas are identified and when Councils or NMFS take actions on individual proposed areas. The list of areas and actions taken will be included as an annex in biennial Reports to Congress.

3.07.10 Timing of when updates are available and the periodicity of available

reporting mechanisms.

The *Deep Sea Coral Research and Technology Program* will report annually on progress made to meeting the performance targets.